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### The Coumadin Ridge: Incidental Finding Mimicking Thrombus on Echocardiogram

Keith Brown Jr.  
*Rowan University*

Matthew Everwine  
*Rowan University*

Keith R. Anacker  
*Rowan University*

Jose Nieves  
*Rowan University*

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# The coumadin ridge: Incidental finding mimicking thrombus on echocardiogram

## Abstract

The left atrial ridge or “coumadin ridge” is a cardiac anatomic structure located between the left pulmonary vein and the orifice of the left atrial appendage. Historically, patients were misdiagnosed with intra-atrial thrombus and were incorrectly placed on anticoagulation with warfarin, ultimately acquiring the name of the “coumadin ridge”. Fortunately this anatomical variant is now more commonly recognized, however when improperly identified can lead to unnecessary testing, cost, diagnosis anxiety, and inappropriate treatment for the patient. This purpose of this case is to bring awareness to this common clinical dilemma in an attempt to reduce ambiguity and unnecessary workups surrounding this anatomical variant.

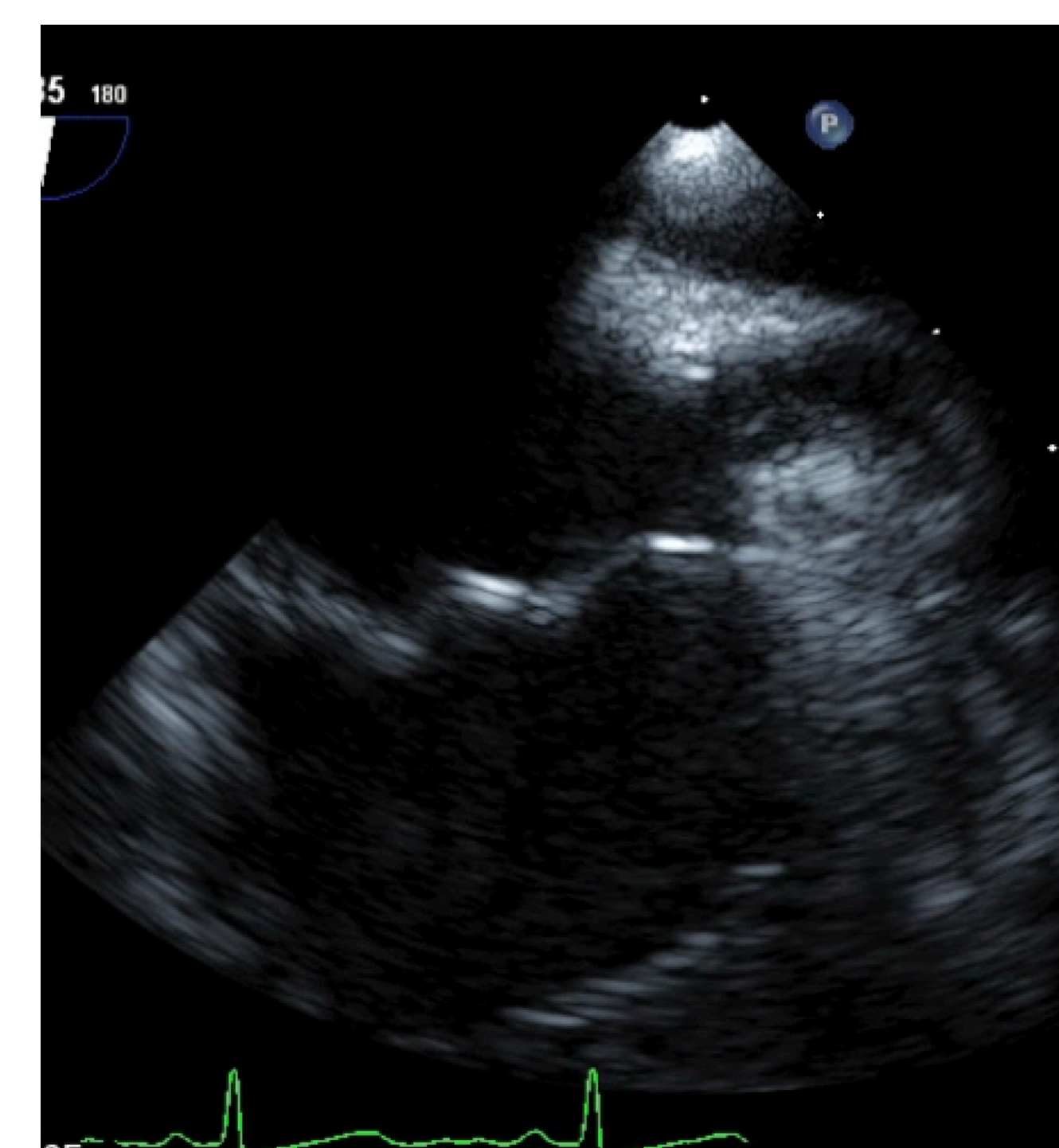
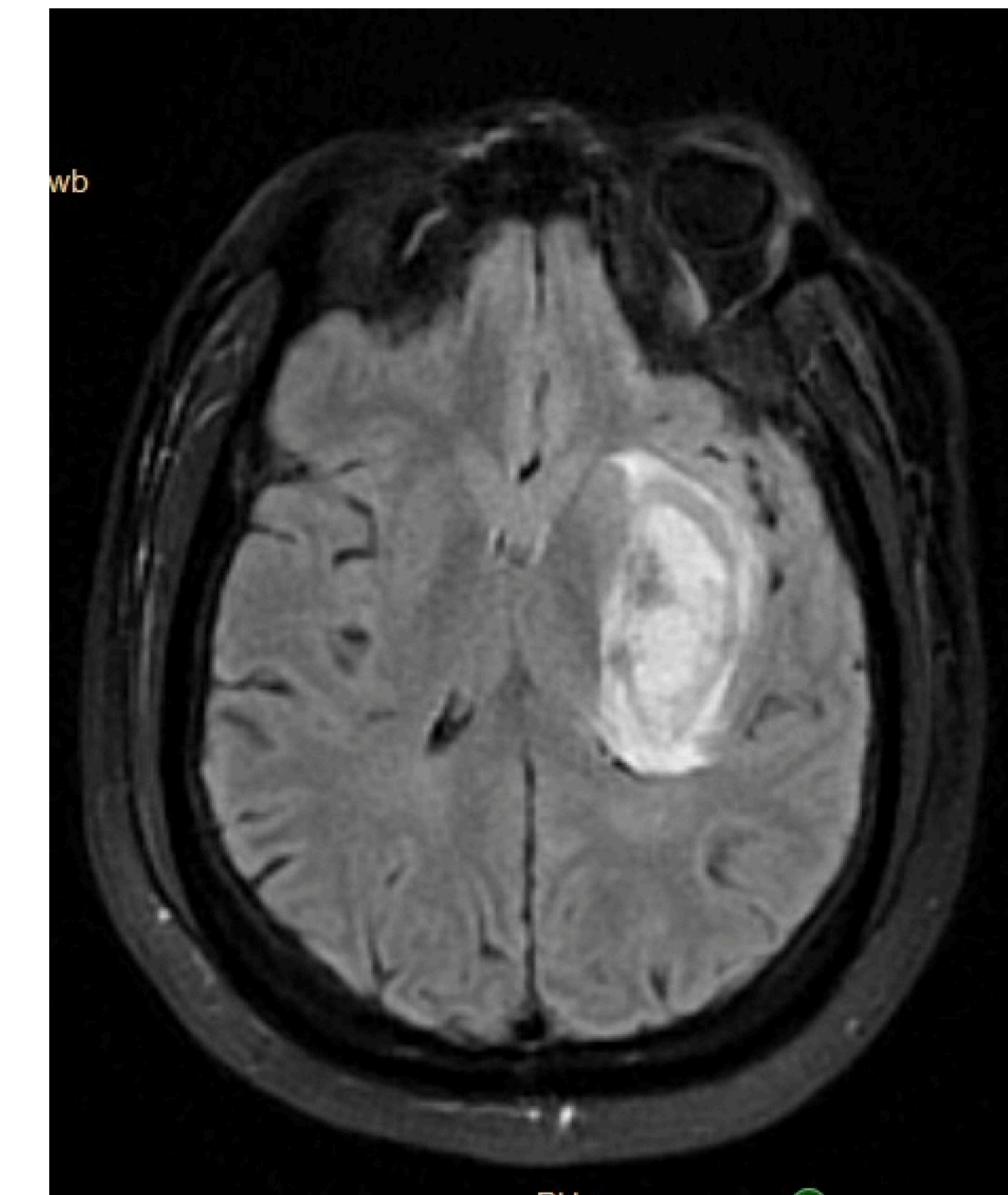
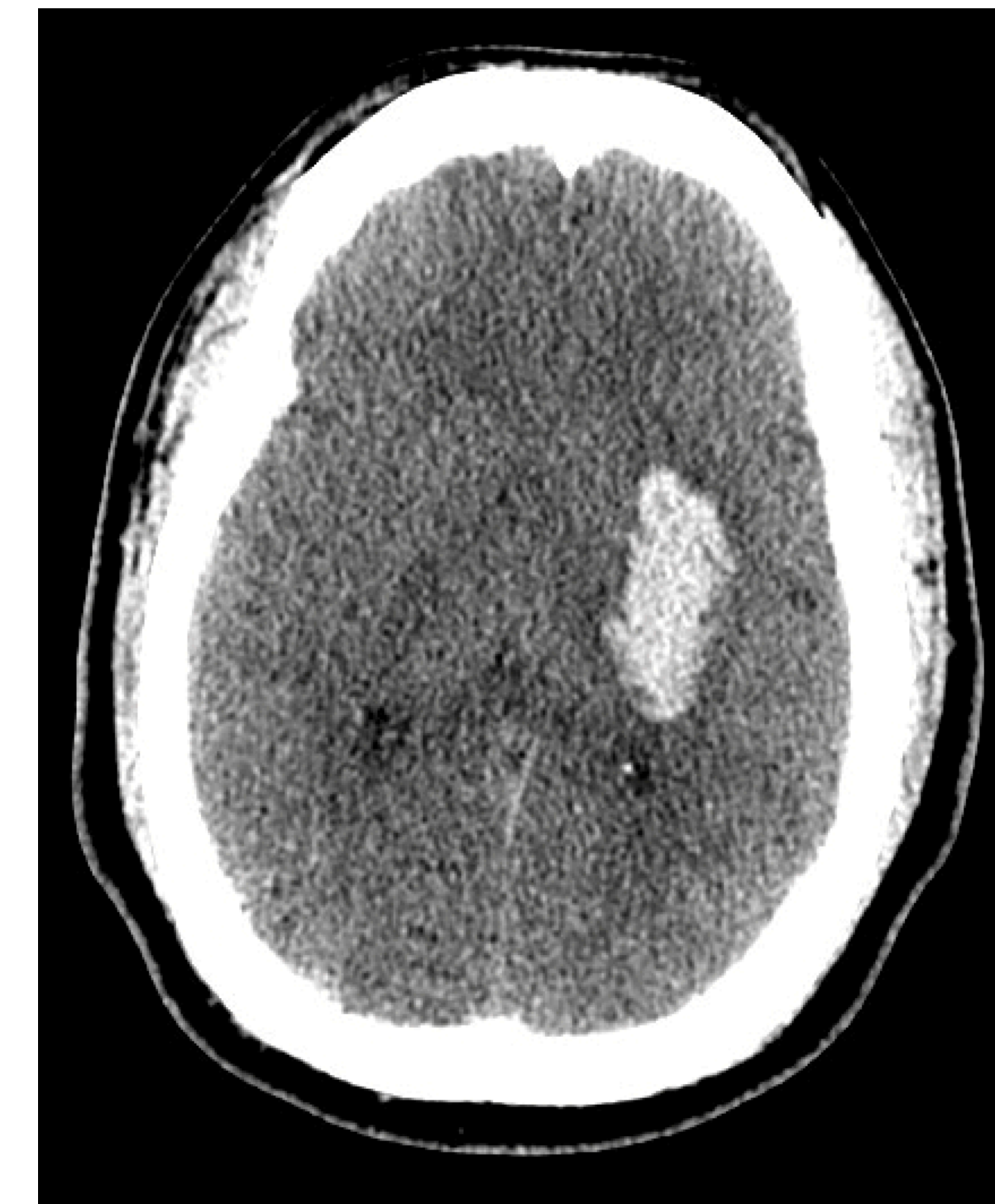
## Introduction

- Echocardiogram is an integral part of evaluation of cardiovascular disorders
- The coumadin ridge is normal embryological remnant in the left atrium undulating with cardiac motion being mistaken for tumor or thrombus
- With more advanced technology, anatomical variants can lead to unnecessary workups and burden on patients
- We present a case of a 31 year-old male who presented for cerebrovascular accident with incidental finding of thickened coumadin ridge mistaken for mass and thrombus.

## Case Presentation

- 31 year-old male with PMHx of hypertension, dyslipidemia presenting for right sided weakness and dysarthria
- Found with 3.7 x 2 cm left lenticular nucleus intracranial hemorrhage.
- Routine transthoracic echocardiogram with left ventricular ejection fraction (LVEF) 35 +/- 5%, hyperechoic area near left atrial appendage and left upper pulmonary vein.
- Transesophageal echocardiogram LVEF 55 +/- 5%, no PFO, well circumscribed, non mobile thickened hyperechoic area near left atrial appendage and left upper pulmonary vein consistent with coumadin ridge.

## Images



## Discussion

- Echocardiogram images are now with higher resolution and becoming more common to assess cardiac anatomy and function
- Incidental findings can lead to unnecessary workups, inaccurate diagnosis, and treatment
- Appearance on echo referred to as “Q-tip sign”
- Coumadin ridge is most often mistaken for myxoma, valve vegetation, and intra-atrial thrombus
- Finding does not require additional intervention, for now
- Future understanding of this variant may lead to serve as a substrate for arrhythmias, or increased risk for thrombus much like the left atrial appendage.

## Conclusion

- Patient was able to be discharged with mild right sided deficits to work with physical therapy
- Required extensive antihypertensive regimen given history of uncontrolled hypertension
- Repeat echocardiogram was stable in appearance
- There is a need for increased awareness regarding this anatomic variant to avoid the need for additional workup and inappropriate treatment.

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